

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

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In the Matter of the Application of Columbus)	
Southern Power Company for Approval of an)	
Electric Security Plan; an Amendment to its)	Case No. 08-917-EL-SSO
Corporate Separation Plan; and the Sale or)	
Transfer of Certain Generating Assets.)	

In the Matter of the Application of Ohio Power)	
Company for Approval of its Electric Security)	
Plan; and an Amendment to its Corporate)	Case No. 08-918-EL-SSO
Separation Plan.)	

**JOINT POST-HEARING BRIEF OF
THE OHIO MANUFACTURERS' ASSOCIATION AND
THE OHIO HOSPITAL ASSOCIATION**

I. INTRODUCTION

This is not a case that requires an in-depth understanding of mathematics, valuing options, the Black (or Black-Scholes) model, or the various inputs used in optionality modeling. The Ohio Supreme Court specifically remanded this case to the Public Utilities Commission of Ohio (the "Commission") to determine: (1) whether any of the categories in Ohio Revised Code ("R.C.") 4928.143(B)(2) authorize Columbus Southern Power Company ("CSP") and Ohio Power Company ("OP") (collectively "AEP-Ohio") to recover certain environmental carrying charges (an issue not addressed in this joint brief); and (2) whether AEP-Ohio presented sufficient evidence to justify a cost-based provider of last resort ("POLR") charge, or in the alternative, satisfied its burden of proving that a non cost-based POLR charge is reasonable (the focus of this joint brief).

As set forth in greater detail below, AEP-Ohio failed to present any evidence that its POLR charge is cost-based and, likewise, cannot justify the reasonableness of a non cost-based POLR charge.

II. PROCEDURAL HISTORY

The above-captioned proceedings commenced in 2008 upon the filing of AEP-Ohio's initial electric security plan ("ESP"). The Commission approved AEP-Ohio's initial ESP in an Opinion & Order dated March 18, 2009, which, among other things: (1) allowed AEP to recover the incremental capital carrying costs that would be incurred after January 1, 2009 on historic environmental investments (2001-2008); and (2) approved the recovery of POLR charges for the three year ESP period.

After several unsuccessful rounds of rehearing, stakeholders challenged the Commission's decision to allow AEP-Ohio to recover such environmental carrying charges and POLR charges by filing an appeal with the Ohio Supreme Court. In an April 19, 2011 decision, the Ohio Supreme Court overturned the Commission's decisions relating to the recovery of the environmental carrying cost charges and POLR charges, and remanded the case for further consideration. *In re Application of Columbus Southern Power Company* (2011), 128 Ohio St.3d 512. On May 4, 2011, the Commission issued an Entry requiring AEP-Ohio to file proposed tariffs removing the environmental carrying cost charges and POLR charges. After discussions with the interested parties, AEP-Ohio responded by filing tariff pages indicating that the environmental carrying charges and POLR charges would be collected from customers subject to refund. The evidentiary hearing on remand began on July 15, 2011, and concluded on July 28, 2011.

Pursuant to the briefing schedule established by the Attorney Examiners, the Ohio Manufacturers' Association ("OMA") and the Ohio Hospital Association ("OHA") jointly and respectfully submit this post-hearing brief.

III. LEGAL ARGUMENT

The Ohio Supreme Court's opinion not only necessitated this remand proceeding, but provided invaluable guidance to the Commission. First, the Court recognized that the "manifest weight of the evidence contradicts the commission's conclusion that the POLR charge is based on cost," as the Court found "no evidence suggesting that AEP-Ohio's POLR charge is related to any costs it will incur." *Id.* at ¶29. Continuing on, the Court explained: "we express no opinion on whether a formula-based POLR charge is per se unreasonable or unlawful, and the commission may consider on remand whether a non-cost-based POLR charge is reasonable and lawful. Alternatively, the commission may consider whether it is appropriate to allow AEP to present evidence of its actual POLR costs." *Id.* at ¶30. In essence, the Court simplified the Commission's task on remand by requiring the resolution of two fundamental questions: (1) Can AEP-Ohio present any evidence that the proposed POLR charge is cost-based? (2) If AEP does not (or cannot) present evidence that the proposed POLR charge is cost-based, has AEP-Ohio demonstrated that a non-cost-based POLR charge is reasonable? As set forth in greater detail below, the answer to both questions is no, therefore warranting both an immediate end to the collection of POLR charges and a full refund of the POLR charges collected from June 2011 until the cost recovery stops.

A. AEP-Ohio's POLR Charge is not Cost-Based.

As part of this remand proceeding, AEP-Ohio had a simple choice: present cost-based evidence for its POLR charge, or demonstrate the reasonableness of a non-cost-based POLR charge. The record demonstrates that there are several methods readily available to determine the

POLR cost, including, among others, various hedging strategies,¹ bidding it out, or any one of several other methods referenced by AEP-Ohio witness Lacasse,² and IEU-Ohio witness Lesser,³ including the Monte Carlo model. Alternatively, AEP-Ohio could have trued up its POLR charge based upon a backward-looking review of actual shopping data and the actual cost to serve those customers.⁴

Notwithstanding AEP-Ohio's recognition of these methods for calculating POLR cost, AEP-Ohio implicitly elected the non-cost-based approach by failing to present even one scintilla of evidence that its POLR charge is cost-based. In fact, AEP-Ohio stated that:

- AEP-Ohio has not conducted any sort of quantitative analysis of the cost to provide POLR service (Tr. Vol. I at p. 18, lines 3-9);
- The only model used to value the cost of providing POLR service (the Black or Black-Scholes model) does not measure out-of-pocket costs and instead is designed to “ultimately value the liability created by giving the rate optionality” (Tr. Vol. I at p. 37, line 25 through p. 38, line 5);
- It did not identify any out-of-pocket costs associated with providing POLR service (Tr. Vol. I at p. 18, lines 1-2; Tr. Vol. II at p. 245, line 2);
- No AEP-Ohio witness identified any out-of-pocket costs associated with providing POLR service because “that is not an appropriate way to look at the cost of providing POLR service to customers” (Tr. Vol. II at p. 245, lines 7-10); and,
- AEP-Ohio acknowledged that actual cost is irrelevant to the only POLR pricing model presented by AEP-Ohio, namely the Black or Black-Scholes model (Tr. Vol. II at p. 152, line 17 through p. 153, line 9).

¹ AEP-Ohio witness Lacasse testified that the POLR risk could be quantified by both forward sales and other hedging mechanisms, such as sales to non-SSO retail customers. See Tr. Vol. II, p. 144-145. AEP-Ohio is familiar with purchasing hedges in other contexts. *Id.* at 272; Tr. Vol. V at 865-873.

² AEP-Ohio Exhibit 3 at 18-20 (Lacasse Direct Testimony); AEP-Ohio Exhibit 5 (Lacasse Rebuttal Testimony); and Tr. Vol. II at 144.

³ IEU Remand Exhibit I (Lesser Direct Testimony).

⁴ Tr. Vol. II at 216.

As AEP-Ohio elected not to provide evidence of cost, the Commission's job has been narrowed to determining whether the use of a non-cost-based model to quantify the risk of providing POLR service is just and reasonable.

B. The Use of an Abstract, Mathematical Formula to Quantify AEP-Ohio's Cost of Providing POLR Service is Unreasonable and Unlawful.

The Ohio Supreme Court recognized that the only evidence presented in support of AEP-Ohio's proposed POLR charge was the "Black-Scholes model," which is a "mathematical formula created to price exchange-traded options." *Id.* at ¶25. Rather than revealing the costs to AEP-Ohio of providing POLR service, this abstract formula "does not even purport to estimate costs, but instead tries to quantify 'the value of the optionality [to shop for power] that is provided to customers under Senate Bill 221.'" *Id.* at ¶26. In reality, the "[v]alue to customers (what the model shows) and cost to AEP. . . are simply not the same thing." *Id.* at ¶26.

Nonetheless, rather than present a new theory or additional evidence in support of the POLR charge, AEP-Ohio relied solely on the Black (or Black-Scholes) model as the basis for its POLR charge. Neither the Black nor the Black-Scholes models demonstrate the reasonableness of the non-cost-based POLR charge and, in fact, these models are fundamentally inappropriate methods for evaluating the POLR risk.

First, AEP-Ohio's model does not take reality into account. The Ohio Supreme Court aptly summarized AEP-Ohio's theory: "AEP derived its charge using a mathematical formula created to price exchange-traded options. The company analogized an option to buy and sell securities to the statutory right to shop for power, changed some variables, and applied the formula." *Id.* at ¶25. Yet, the Court recognized the limitations in the model and the inherent flaws in AEP-Ohio's theory, stating:

Other facts in the record further call into question the accuracy of AEP-Ohio's POLR theory. The record showed that AEP has had 'virtually no' shopping in

the last eight years, including no residential shoppers. No countervailing evidence predicted an uptick in shopping. No witness testified that more switching could be expected in the future, and AEP performed no ‘actual customer surveys’ or ‘studies apart from the Black-Scholes model’ to determine whether shopping was likely to increase. On the contrary, the commission’s own economist testified that ‘there are many reasons to think that substantial migration will not quickly occur, even if the market price falls below the SSO [standard service offer] price.’ Even AEP’s witness testified that ‘[d]esire to switch, in [his] view, will be when there’s an economic advantage,’ but that ‘today,’ there is ‘no economic advantage.’ Accordingly, AEP did not even ‘have a plan to purchase’ options to hedge its own POLR risk. **At the very least, all this evidence raises doubts about the proposition that AEP would justifiably expend \$500 million to bear the POLR risk.**

(Emphasis added). *Id.* at ¶28.

But, reality and the record demonstrate that AEP-Ohio’s model produced unreasonable POLR charges. AEP-Ohio had virtually no shopping in 2010 (especially among residential customers), with CSP experiencing a high of 6.993% of total sales being served by a CRES provider in the 4th quarter of 2010, and OP experiencing a high of 2.902% of total sales being served by a CRES provider in the fourth quarter of 2010.⁵ It is entirely unreasonable to ignore actual shopping numbers in order to justify a mathematical estimate—and even more unreasonable to use such an inaccurate mathematical estimate to justify AEP-Ohio’s recovery of \$500 million from Ohio ratepayers to compensate them for a nonexistent risk.

Second, it is not a model that is ever used for the purpose for which AEP-Ohio applied it. AEP-Ohio readily acknowledged that it is “not aware of any other utilities that have chosen that particular method to determine what the [POLR] cost is.”⁶

AEP-Ohio had this remand proceeding as the opportunity to clear up any misgivings about its model. AEP-Ohio could have “proved” the Black-Scholes model by comparing the predicted

⁵ Data from the first quarter of 2011 demonstrates a slight uptick in shopping levels for CSP (15.357% of total sales) and a slight decrease for OP (0.49% of total sales). See also Companies Remand Exhibit 4 (Direct Testimony of Laura J. Thomas) at Attachment LJT-2, page 1 (confirming the level of shopping for CSP).

⁶ Tr. Vol. II at 286; *see also* Tr. Vol. II at 287.

results to the actual results. But, AEP-Ohio did not “prove” its model. Rather, AEP witness Thomas admitted that she did not conduct any studies to compare the results of the Black-Scholes modeling (using the unconstrained or constrained models) to actual shopping levels for the three year term of the ESP.⁷ In fact, AEP-Ohio witness Thomas absurdly states that it would be ineffective to verify the quality of its modeling against actual shopping numbers.⁸

In reality, AEP-Ohio only attempted to justify the results of the \$500 million dollar POLR charge by pointing to the results of the same mathematical model. As AEP-Ohio witness Thomas explained, AEP-Ohio used the results from the “constrained” or Black model in the ESP II case⁹ to corroborate and justify the \$500 million POLR charge resulting from the use of the “unconstrained” or Black-Scholes model presented by AEP-Ohio witness Baker in the first part of this proceeding.¹⁰ Specifically, Ms. Thomas explained, “I used that [the constrained or Black model] to basically confirm that the rates approved by the Commission were reasonable rates relative to what we can calculate today.”¹¹

It is unreasonable to rely on the results from the “constrained” Black model (in the ESP II case) to corroborate the results from the “unconstrained” Black-Scholes model in this proceeding. In fact, the “constrained” and “unconstrained” designations do little more than unnecessarily complicate this case and gloss over the fact that AEP-Ohio continues to rely on the same mathematical model questioned by the Ohio Supreme Court. This clearly is not what the Ohio

⁷ Tr. Vol. II at 221.

⁸ Tr. Vol. II at 219.

⁹ *In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Ohio Revised Code, in the Form of an Electric Security Plan*, Case No. 11-346-EL-SSO *et al.*, Application (January 27, 2011) (hereinafter, “ESP II”).

¹⁰ Throughout the evidentiary hearing, the parties referred to the Black-Scholes model used by AEP-Ohio witness Baker in the initial portion of the above-captioned proceedings as the “unconstrained model” (Tr. Vol. II, p. 150, lines 2-10), and the Black model (which includes a number of switching constraints) used by AEP-Ohio in its pending ESP II case (an entirely separate docket) as the “constrained model” (Tr. Vol. II, p. 150, lines 10-17).

¹¹ Tr. Vol. II at 243; *see also* Tr. Vol. II at 255 - 256.

Supreme Court contemplated in its remand order—and assuredly insufficient evidence to demonstrate the reasonableness and lawfulness of the POLR charges.

Moreover, AEP-Ohio's witnesses lack credibility as experts on the models even assuming that the model was appropriate for determining the POLR charge. AEP-Ohio sought to justify the use of the Black (or Black-Scholes) model through the testimony of three witnesses, including Dr. Lacasse. Yet, Dr. Lacasse testified that she has no experience: examining the alleged costs associated with customer shopping, examining the methods by which costs associated with shopping risks are quantified, or using optionality methods for measuring costs associated with shopping risks.¹² Perhaps more shocking, Dr. Lacasse does not regularly work with the Black-Scholes model (and, in fact, has never worked with the Black-Scholes model before this case), and has never used an option model to price shopping risks.¹³ Dr. Lacasse's statement that the use of a mathematical, option- pricing formula is appropriate to price AEP-Ohio's POLR risk is unconvincing.¹⁴

Finally, and assuming *arguendo* that the Black (or Black-Scholes) model actually measures the *value* of shopping to a customer, AEP-Ohio still failed to provide even the slightest justification to support using the "value" to the customer as the basis for its POLR charge. The use of a mathematical formula to determine the theoretical "value" of shopping is a foreign concept in utility regulation. Utility practitioners determine "value" based on either market prices or cost-based accounting principles. This critical point constitutes the basis for the Ohio Supreme Court's criticism of the Commission's initial findings in the case. In no event should the Commission allow AEP to simply *invent* a charge based on non-utility principles to collect significant charges from its customers.

¹² Tr. Vol. II at 137-138.


¹³ Tr. Vol. II at 149-150.

¹⁴ Tr. Vol. II at 153

IV. CONCLUSION

For the reasons stated above, OMA and OHA respectfully request that this Commission find that AEP-Ohio has not met its burden of demonstrating that the POLR charges are just and reasonable and direct AEP-Ohio to immediately refund the POLR amount collected since June 2011, and cease collection of any further POLR charges going forward.

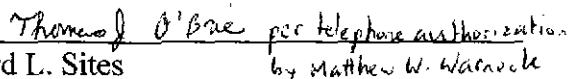
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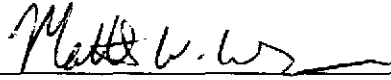


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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing was served upon the following parties of record via electronic mail this 5th day of August 2011.



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